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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,300	09/26/2003	Kohci Murayama	03500.017683.	5356

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NEW YORK, NY 10112

EXAMINER

SCHNEIDER, JOSHUA D

ART UNIT	PAPER NUMBER
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2182

MAIL DATE	DELIVERY MODE
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05/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/670,300

Applicant(s)

MURAYAMA ET AL.

Examiner

Joshua D. Schneider

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 0207.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 5 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's arguments are centered on the transaction in Van Loo not being sent directly to the switch but to a switch controller. Van Loo teaches the same functions being executed, but with the control being physically distinguished from the actual paths between the masters and the slaves. However, making the switch controller integral with the actual switch paths is not patentably distinguishable. In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965) (The court affirmed the rejection holding, among other reasons, "that the use of a one piece construction instead of the structure disclosed in [the prior art] would be merely a matter of obvious engineering choice.). The Van Loo reference itself shows the encapsulation of switch controller with the actual switch paths to form a single element (interconnect, Fig. 1, element 25). Therefore, a new rejection has been given with substantially the same art.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the European Patent Application EP 0752667 to Van Loo in further view of U.S. Patent 6,247,101 to Settles and In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

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5. With regards to claims 1 and 5, Van Loo teaches a plurality of masters (Fig. 1A, elements M1-M3), a plurality of slaves (Fig. 1A, elements S1-S3), and a bus that is provided with a switch (Fig. 1A, element 92, column 8, lines 1-24), which wherein the switch can connect each of the plurality of the masters and an arbitrary one of the plurality of slaves in an a read transaction which includes a read command transaction and a read data transaction (Fig. 1A, element 92, column 8, lines 1-24, column 18, lines 27-53), wherein in the read command transaction, a master initiates a transaction with a switch request for connecting with a slave, the switch establishes a connection between the master and the slave, and the master issues an address and a command and the switch releases the connection before the read return data is issued from the slave (column 3, line 41, through column 4, line 24, and column 15, lines 53-59), and wherein in the read data transaction the slave issues a switch request for connecting with the master after the connection is released in the read command transaction, the switch establishes a connection between the slave and the master independent from the connection made in the read command transaction and the slave issues read return data, and wherein, before the read data transaction is completed, an read command transaction of a next read command transaction can be issued (column 3, line 41, through column 4, line 24, and column 15, lines 52, through column 17, line 18). While Van Loo shows that the request address phase and request reply data phase are separate, it does not explicitly teach a slave requesting for switch connection, though such switch connection requesting is most likely inherent to the access of the switch to complete the transaction. Settles teaches that slave mode devices that can issue bus requests to complete data transfer are well known in the art (column 6, lines 18-58). It would have been obvious to one of ordinary skill in the art at the time of invention to use the slave bus requesting of Settles with the

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master slave switching of Van Loo in order to allow slaves to gain access to the switch to complete bus transaction request from the master devices. All of the embodiments of do not teach that the controller that control signals and data signals are received by the same switch element, but Van Loo does teach one such embodiment (interconnect, Fig. 1, element 25). It would have been obvious to one of ordinary skill in the art at the time of invention to make the switch controller integral with the actual switch paths in Van Loo in order to simplify data routing and minimize cost by eliminating unnecessary interconnections of parts. In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

6. With regards to claim 4, Van Loo teaches wherein a start signal for initiating the transaction is used also as a request signal for the switch request for connecting with the slave (column 12, lines 11-33).

7. With regards to claim 6, Settles teaches wherein a start signal for initiating data return in the data phase is used also as a request signal for the switch request for connecting with the master (column 6, lines 18-58). It would have been obvious to one of ordinary skill in the art at the time of invention to use the slave bus requesting of Settles with the master slave switching of Van Loo in order to allow slaves to gain access to the switch to complete bus transaction request from the master devices.

8. With regards to claim 7, Van Loo teaches wherein the next transaction can be a transaction from another master to the slave (column 15, lines 52, through column 17, line 18).

9. With regards to claim 8, Van Loo teaches wherein the next transaction can be a transaction from the master to another slave (column 15, lines 52, through column 17, line 18).

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10. With regards to claim 9, Van Loo teaches the master issues an identifier of the master with the address and the command to the slave in said read command transaction step, and the slave issues the identifier of the master with the read return data in said read data transaction step (column 7, lines 17-39).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Schneider whose telephone number is (571) 272-4158. The examiner can normally be reached on M, T, Th, and F, 9-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JDS



KIM HUYNH
SUPERVISORY PATENT EXAMINER

5/14/07